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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/671,566

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Michel Meydieu

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HAROLD R. BROWN III
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

JULES, FRANTZ F

ART UNIT

PAPER NUMBER

3617

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,566

Applicant(s)

MEYDIEU ET AL.

Examiner

Frantz F. Jules

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-5, 9-13, 17-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, line 1, the word "it" is confusing as it is unclear which particular previously recited structure in claim 1 applicant is referring to. Similar problem exists in claim 9-13, line 1, claim 17, line 8, claim 19-20, line 1, claims 24-28, line 1, claims 31-44, line 1.

Claim 5 recites the limitation "the loss of head" in line 1. There is insufficient antecedent basis for this limitation in the claim.

In claim 4, line 1, the phrase "a loss of head device (78) interposed between the reception chamber and the valve" is confusing as the specification describes the reception chamber as the rim of a wheel which is identified as item 3 on the drawings and the valve VA is shown in fig. 3 as being inside of the rim of the wheel. The loss of head device (78) is also shown as being mounted on the wheel. Thus it is unclear as to what applicant is referring to by "a loss of head device (78) interposed between the reception chamber and the valve".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battocchio (WO 94/13499 A1) in view of Knorr-Bremse (US 1 397 372) and Pugh et al (US 2,406,899).

Claims 1-3, 6-13

Battocchio discloses an inflation circuit comprising a compressed fluid source (2), a compressed fluid supply line connected to the source, a valve (VA) interposed in the supply line between a reception chamber and the fluid source, a branch (No) connected to the supply line between the valve and the source, a diversion line (1) connected to the branch, and a valve (EVDG) connected to the diversion line, characterized in that the valve comprises a free differential valve.

Battocchio teaches all the limitations of claims 1-3, 6-3 except for a non-return valve in the supply line between a reception chamber and the fluid source and a calibrated leak device. The general concept of providing a non-return valve in the supply line between a reception chamber and the fluid source in a fluid circuit is well known in the art as illustrated by Knorr-Bremse which discloses the teaching of a non-return valve (29 or 34) in the supply line between a reception chamber and the fluid source, see col 5, lines 116-120. Also, the general concept of providing a calibrated leak device in a pressure circuit is well known in the art as illustrated by Pugh et al which discloses the teaching of a calibrated leak device in a fluid circuit, see col 7, lines 6-7. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Battocchio

to include the use of a non-return valve in the supply line between a reception chamber and the fluid source of his advantageous inflation circuit as taught by Knorr-Bremse in order to prevent compressed air from flowing out of the line circuits as recited in col 5, lines 116-119. Moreover, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Battocchio to include the use of a calibrated leak device at a diversion line in his advantageous inflation circuit as taught by Pugh et al in order to maintain the pressure in the line.

Claim 15-16

Regarding calibrating the leak in order to achieve total deflation of the chamber in more than 50 seconds and controlling the valves having trefoil shaped profile independently of one another as recited in claims 14-16, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Battocchio to include the use of calibrating the leak in order to achieve total deflation of the chamber in more than 50 seconds and controlling the valves independently of one another in his advantageous system, as valve control and calibration is a common and everyday occurrence throughout the suspension inflation circuit design art and the specific use of calibrating the leak in order to achieve total deflation of the chamber in more than 50 seconds and controlling the valves independently of one another would have been an obvious matter of design preference depending upon such factors as the pressure loading of the inflation circuit, the yield strength of the pipe material; the ordinarily skilled artisan choosing the best stress profile corresponding to a particular loading imposed on the piping which would most optimize the cost and performance of the device for a

particular application at hand, based upon the above noted common design criteria.

5. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battocchio (WO 94/13499 A1), Knorr-Bremse (US 1 397 372) and Pugh et al (US 2,406,899) as applied to claim 1, and further in view of Genna (US 5,587,698).

Battocchio, Knorr-Bremse and Pugh et al teach all the limitations of claims 4-5 except for a loss of head device between the reception chamber and the valve. The general concept of providing a loss of head device in a tire assembly between the tire and a valve is well known in the art as illustrated by Genna which discloses the teaching of means for remotely controlling venting of air from a tire in an inflation circuit, see col 20, lines 30-39. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Battocchio, Knorr-Bremse, Pugh et al to include the use of a loss of head device between the reception chamber and the valve in order to prevent over pressure in the line.

6. Claims 1-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battocchio (WO 94/13499 A1) in view of Boulicault (4,922,946).

Claims 1-13, 17-28, 32-44

Battocchio discloses an inflation circuit comprising a compressed fluid source (2), a compressed fluid supply line connected to the source, a valve (VA) interposed in the supply line between a reception chamber and the fluid source, a branch (No) connected to the supply line between the valve and the source, a diversion line (1) connected to

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the branch, and a valve (EVDG) connected to the diversion line, characterized in that the valve comprises a free differential valve.

Battocchio teaches all the limitations of claims 1-3, 17-28, 32-44 except for a non-return valve in the supply line between a reception chamber and the fluid source, a calibrated leak device or a loss of head device. The general concept of providing a non-return valve in the supply line between a reception chamber and the fluid source in a fluid circuit is well known in the art as illustrated by Boulicault which discloses the teaching of a non-return valve (1) with check valve (70) in the supply line between a reception chamber and the fluid source, see Fig. 9. Also, the general concept of providing a calibrated leak device or a loss of head device between a reception chamber and a valve is well known in the art as illustrated by Boulicault which discloses the teaching of a calibrated leak device or loss of head device constituted by check valve (70) to an inflation circuit. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Battocchio to include the use of a non-return valve in the supply line between a reception chamber and the fluid source of his advantageous inflation circuit as taught by Boulicault in order to achieve a control valve which is capable of providing a measurement of the pressure inflated in the volume at reduce cost while preventing back flow as disclosed in col 2, lines 15-31. Moreover, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Battocchio to include the use of a calibrated leak device or a loss of head device in his advantageous inflation circuit as taught by Boulicault in order to allow the fluid to escape

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from volume 2 to the outside atmosphere thereby balancing the pressure in volume 2 as disclosed in col 5, lines 60-63, col 6, lines 33-40.

Claims 15-16, 29-31, 45-47

Regarding calibrating the leak in order to achieve total deflation of the chamber in more than 50 seconds and controlling the valves having trefoil shaped profile independently of one another as recited in claims 14-16, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Battocchio and Boulicault to include the use of calibrating the leak in order to achieve total deflation of the chamber in more than 50 seconds and controlling the valves independently of one another in his advantageous system, as valve control and calibration is a common and everyday occurrence throughout the suspension inflation circuit design art and the specific use of calibrating the leak in order to achieve total deflation of the chamber in more than 50 seconds and controlling the valves independently of one another would have been an obvious matter of design preference depending upon such factors as the pressure loading of the inflation circuit, the yield strength of the pipe material; the ordinarily skilled artisan choosing the best stress profile corresponding to a particular loading imposed on the piping which would most optimize the cost and performance of the device for a particular application at hand, based upon the above noted common design criteria.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

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Skoff, Wolf, Beau, Heyne et al, Lechatelier, Claussen et al Pugh et al'899 are cited to show related inflation circuit comprising non-return valve between an tire and a valve in addition to a head loss device.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (571) 272-6681. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frantz F. Jules
Primary Examiner
Art Unit 3617

FFJ

May 4, 2006

FRANTZ F. JULES
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to be 'Frantz F. Jules', written over a horizontal line.

